# Menlo Park Notebook #153 [N-80-09-11]

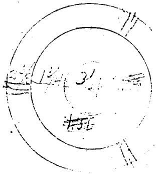
This notebook covers the period September 1880-February 1881. Most of the entries are by Edward H. Johnson and John Ott. There are also a few entries by Edison and Charles Batchelor. Most of the material relates to experiments by Johnson, aided by Ott, to develop fixtures for use by consumers of the electric light. Included are notes, drawings, and instructions regarding the design of chandeliers, sockets, and interior wiring. There are also notes and drawings by Ott relating to experiments on an electric meter; drawings by Edison of the electric railroad; and drawings and notes by Batchelor on copperplating carbons in order to clamp them to lead-in wires. The cover is labeled "J. F. Ott. Meter" and "Socket." The book contains 282 numbered pages.

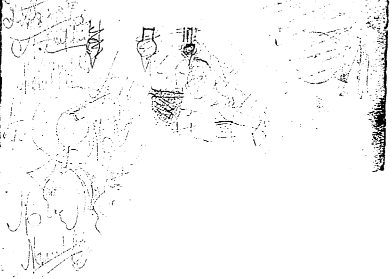
Blank pages not filmed: 134-139, 198-274, 277-278, 281.

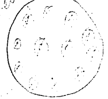
Missing page numbers: 35-36, 275-276, 279-280.

Memphis

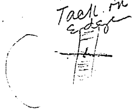
No Chandeliers



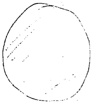


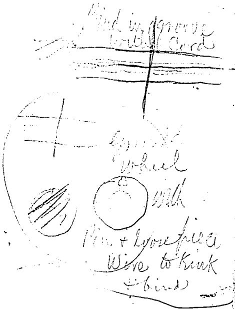


Screw & washer



Tack on edge





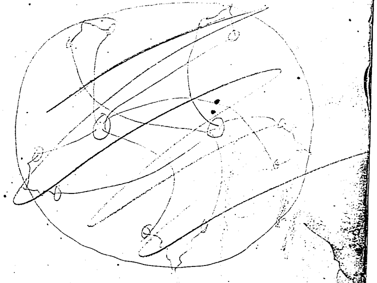
Bind in groove with Cord

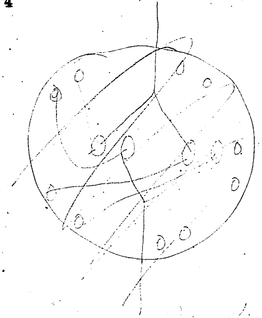
Groove wheel with Pin & loose piece Wire to kink & bind

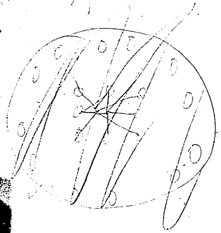
~~Eugene Phillips~~
~~1 ft Sample Every Kind Wire~~
~~Ever made or gotten to make~~
~~Sept 11/80~~

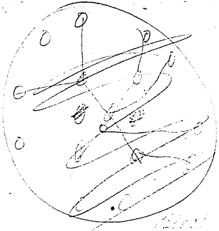
Done

~~Benjamin~~
~~Send Samples of~~
~~[illegible]~~

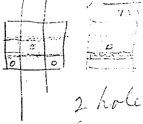








Block
2 1/2 [illegible]
[illegible]
& Kink wire



2 holes to tie to
Gas Pipe

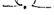
Use Rubber Rings to fasten this block with [illegible] wires taut — or Spiral Springs

If 2 wires are twisted together – Rubber bands will hold them without Block —

Cover Wires with
Strip brass wound Spiral

Brass Wire Spring slipped
Over wires [illegible] hang
Gracefully where wires
are thin and pliable

thin brass strip bent
Spring [illegible] this

 or this,

with Rivets

Vulcanite tubing N.Y.
Will work with heat
of Room

Wants

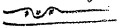
Spiral Springs for Wire Covering

See Mitchell Vance man
about shaping machines
for Ornamental work

to Keep Dust & Moisture
Off Connection at top
of Chandelier. slip a
Rubber Coat over Block
overlapping its Edges
& fitting Tight around
the Gas Pipe

To make — John Ott —
Insulating Block —
3. Lamp Sockets. Keys
Wind over Brass wire
Spirals

adopted -
3 Tacks in line - for a
Wire fastening . Thus

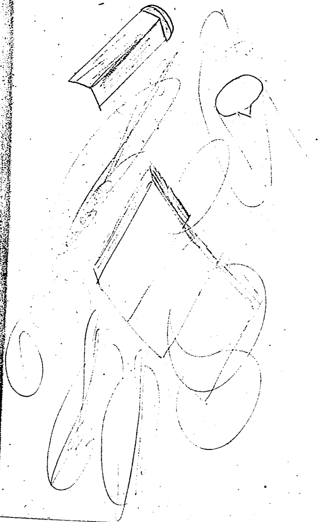


## Wall Brackets

Special Wall Cap for Connections

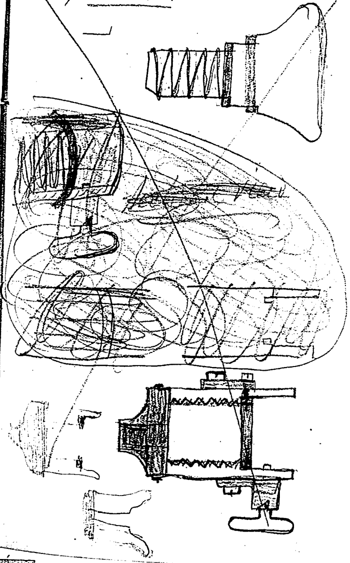
Bear the Bracket Pipe with Spirally wound wire to give flexibility

~~Wh~~ For double pipe [illegible] use spiral wire & wind the Conductors Spirally

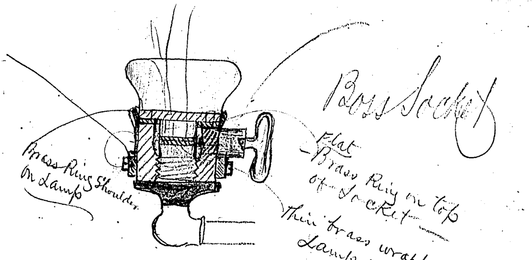


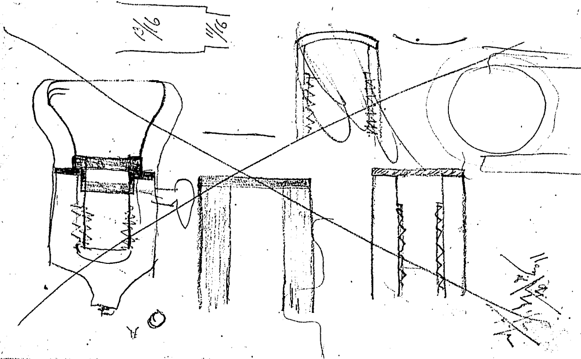
Hall Lights
To raise & lower -
use Spirally wound wire
& wind Conductors in the
Spirally

# Sockets

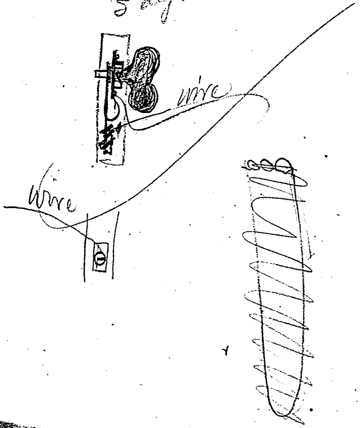


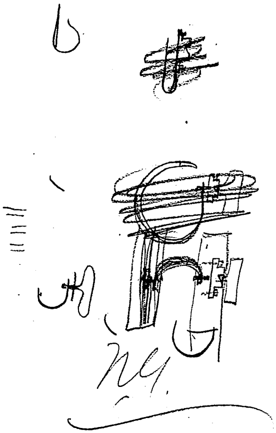
Boss Socket


Brass Ring Shoulder on Lamp
Flat
Brass Ring on top of Socket
thin brass wrapped around Lamp holder


13/16
11/16
A

Edison says N.G.

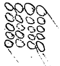




N.G.

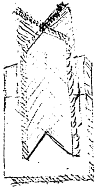
ask Edison if Metal Can be covered with thin Vulcanite

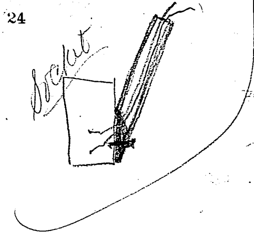
If so cover the cock of Lamp Socket

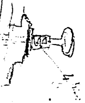


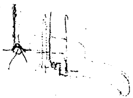
16 wires of 34 1/2 [illegible]

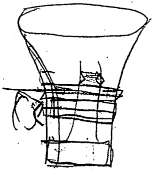
0.1 Diameter

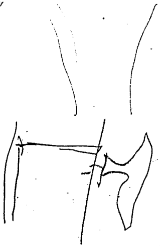


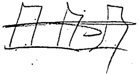

Svalut

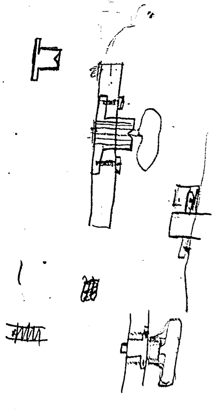


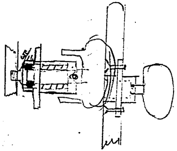


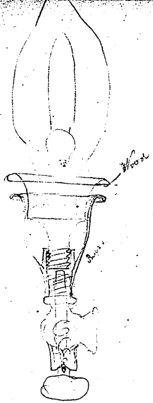


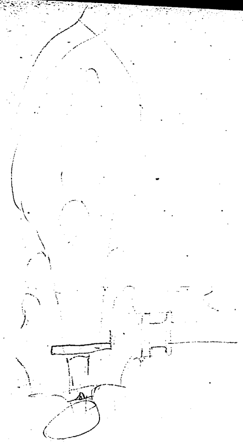


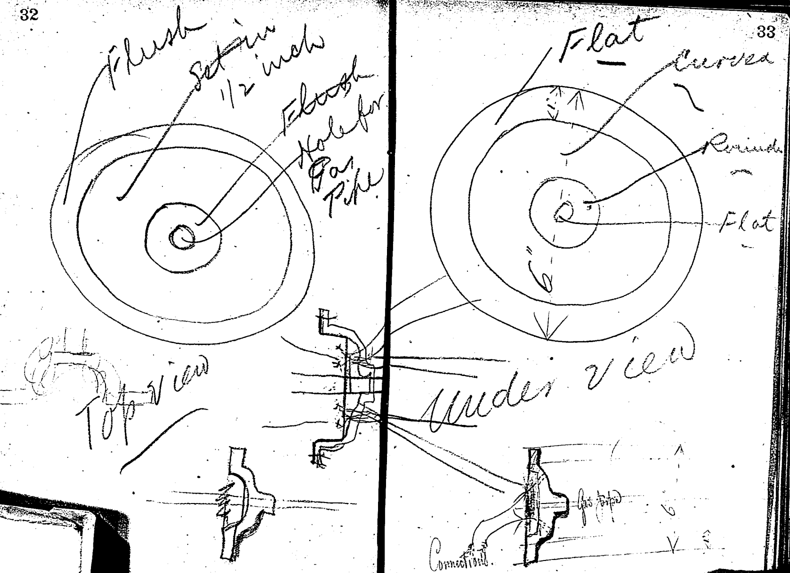


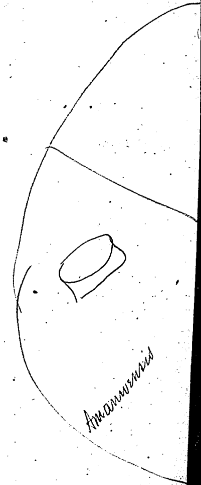


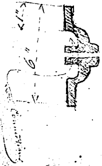



Wood
Brass



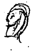

Flush
Set in
1/2 inch
Flush
Hole for
Gas
Pipe
Top view
Flat
Curved
Round
Flat
6"
Under view
Gas Pipe
6
Connections


Amanuensis

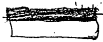


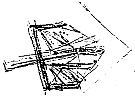
Make Large Socket with
Wood Screw - Flat thread

More curve at top -



3/8 in Tit on Glass for Cork

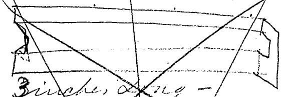




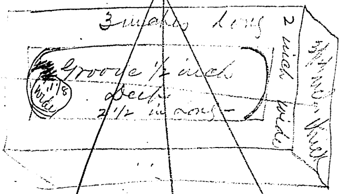
Wires

25/1000 wire copper
75/1000 Insulation
1/32 in Lead Sept 23/80

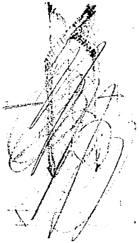
m

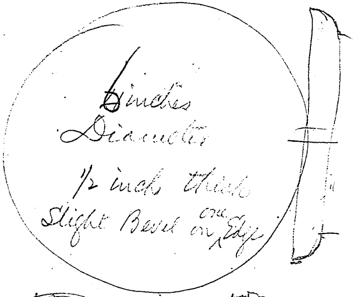


3 inches long -
2 inches wide 1 inch thick
1/4 inch grooves
1/2 Inch DEEP

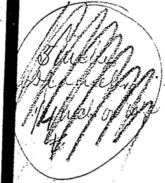

3 inches long
2 wide
3/4 inch thick
Groove 1/2 inch deep
2 1/2 in long -
1/8 wide
wide

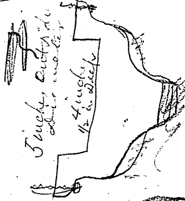
~~Straight~~ ~~Board~~ ~~Die~~



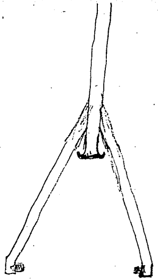


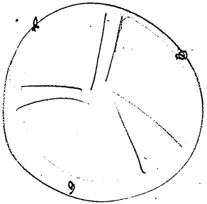
6 inches
Diameter
1/2 inch thick
Slight Bevel on one Edge

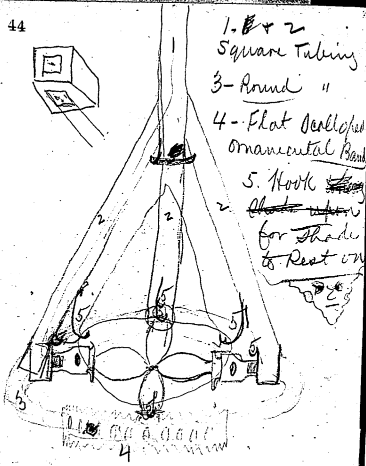




7 inches outside [illegible]
4 inches
1/2 in Deep




9

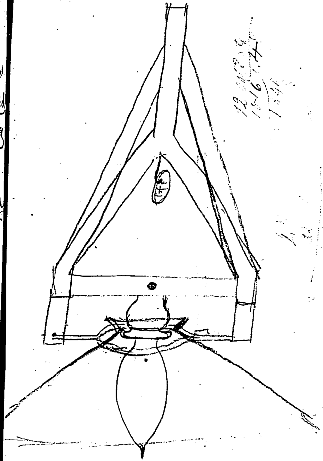

1
2
2
2
5
5
5
5
5
5
3
4

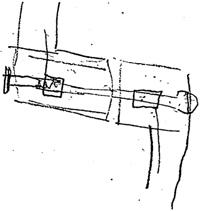
1. ~~[illegible]~~ + 2
Square Tubing

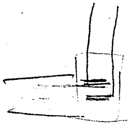
3 - Round "

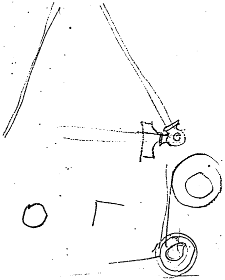
4 - Flat Scalloped
Ornamental Band

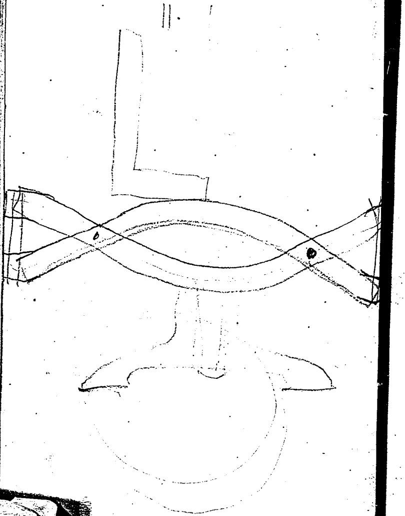
5. Hook ~~[illegible]~~
~~[illegible] upon~~
for Shade
to Rest on

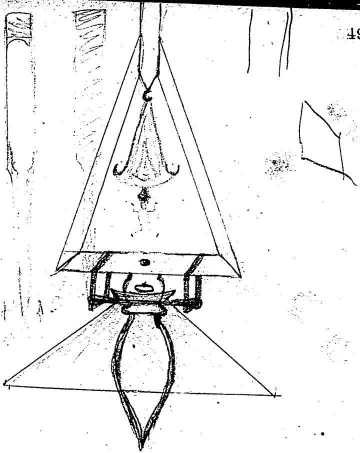


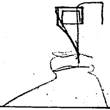


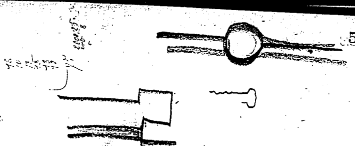


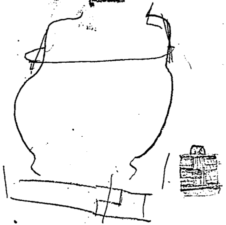


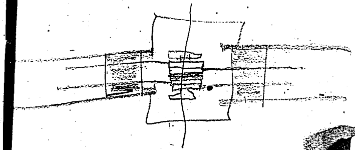








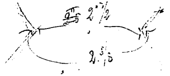


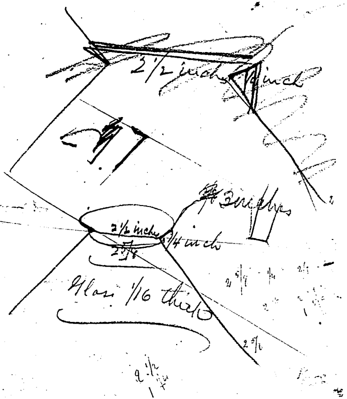


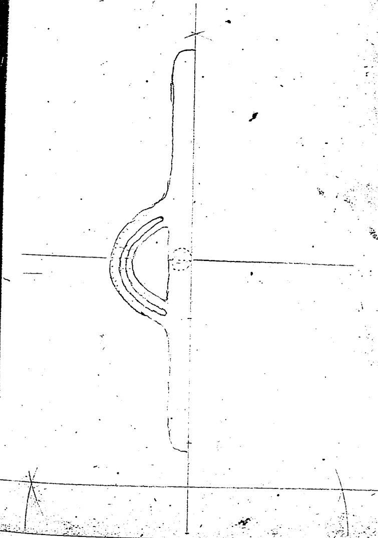
2. 3/32

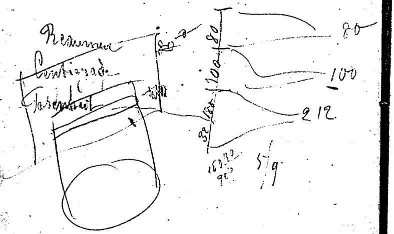
5/32

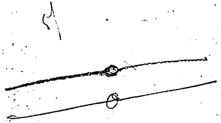
13

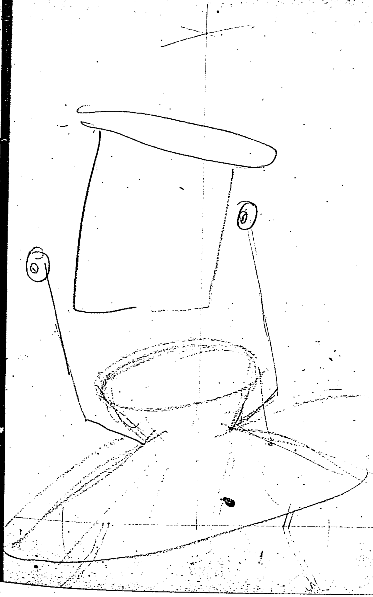

2 1/2
2 5/8

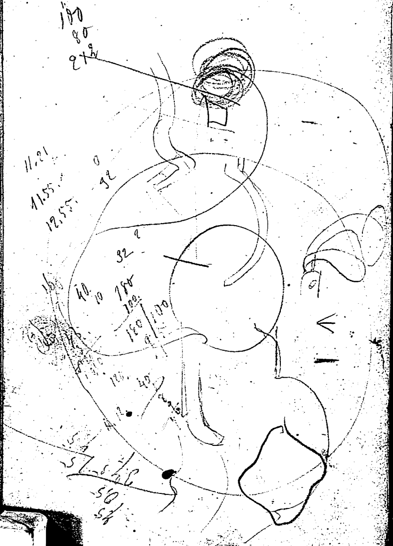

2 1/2 inches
1 inch
3 inches
2 1/2 inches
1/4 inch
2 5/8
Glass 1/16 thick
2 5/8
2 5/8
1/4
9 1/2

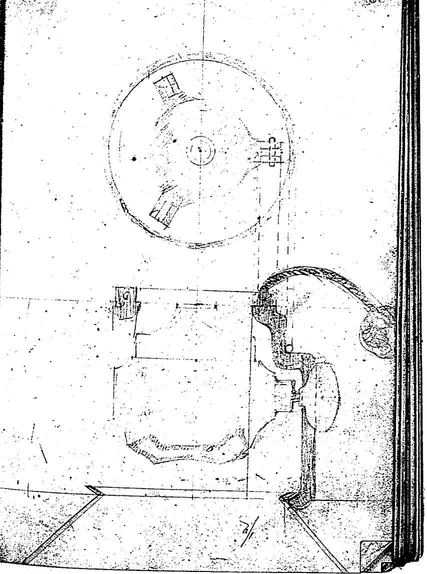


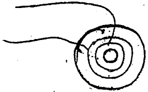

Reaumur
Centigrade
Farenheit
80
80
100
180
32
80
100
212
180 32
90
5/9

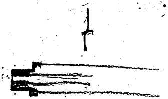


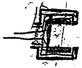


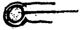

100
80
27
11,21
11,55
12,55
0
92
92
40
10
180
100
100
180
120
40
50
54

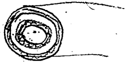


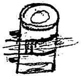




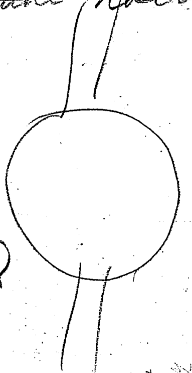




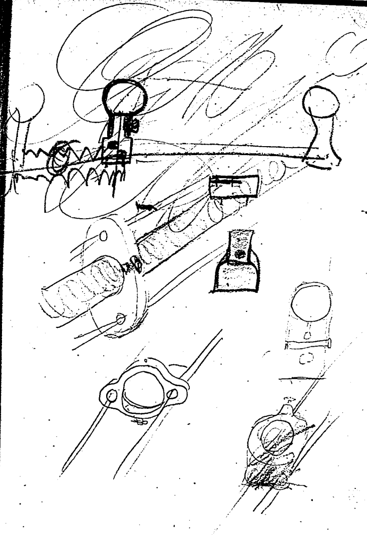


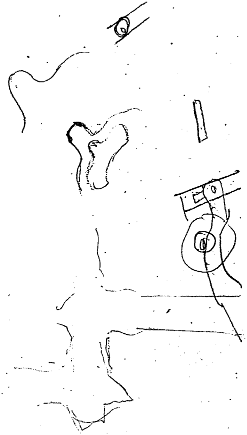


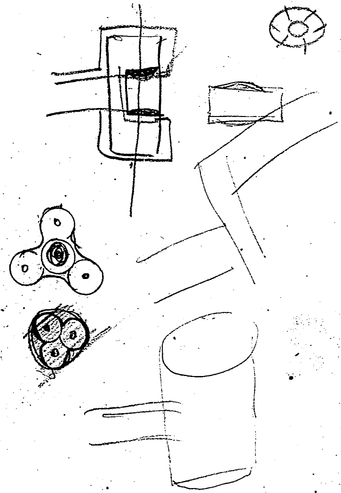
~~Go ahead on~~
~~Shade Ladder.~~



14







1 = 2000 / 20 / 4

1⁵

20
4
80

159 / 1

1'' 16

5
15
10
15
15
15
10
3 | 85

13
14
15
10
18

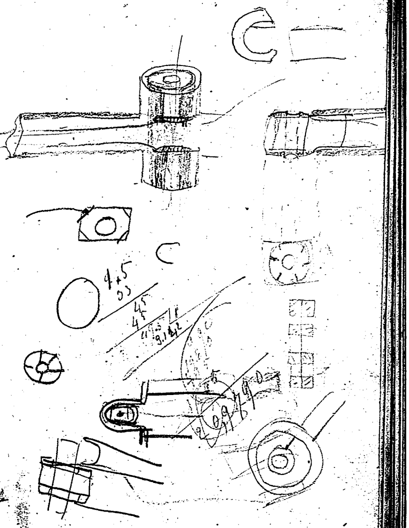
2

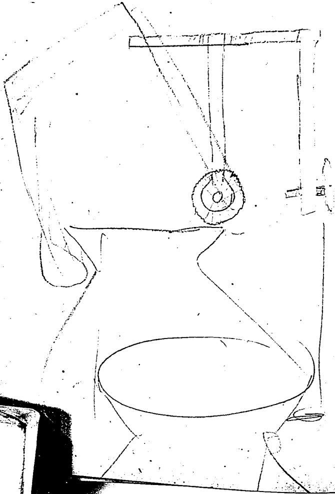
51

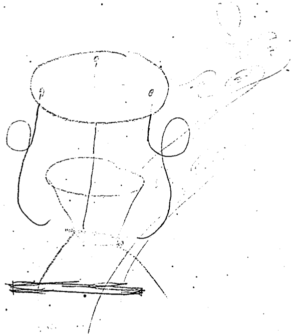
1

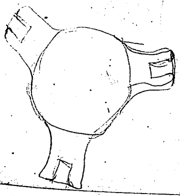
510 | 254
2
20
16

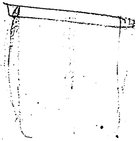
405
9114
1980
1105
4115
1218
1554.30
13

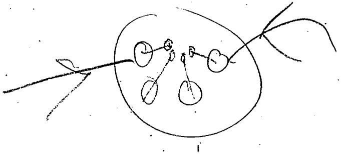

4,5
55
45
45
14.5
9.142
15
99
79

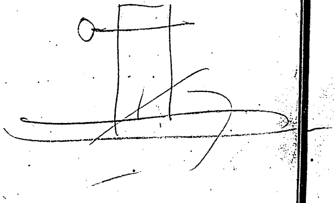


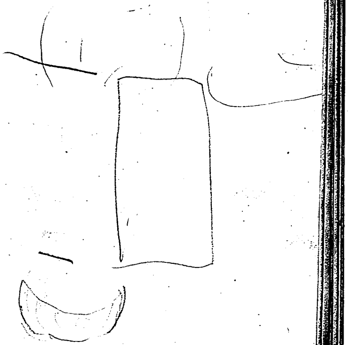


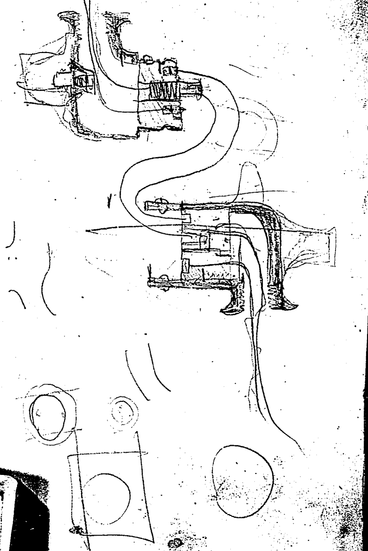


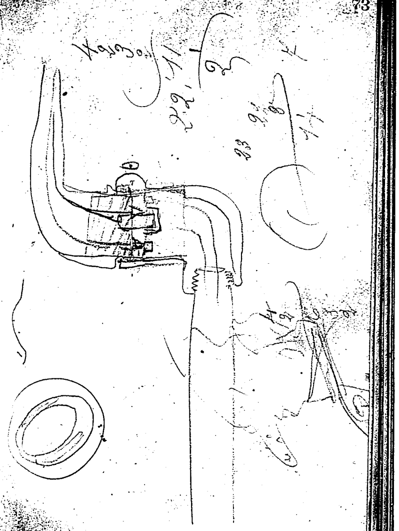


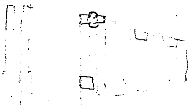


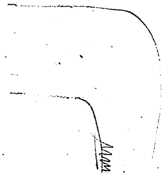


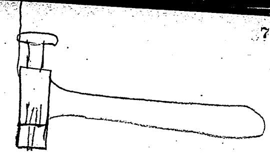


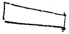


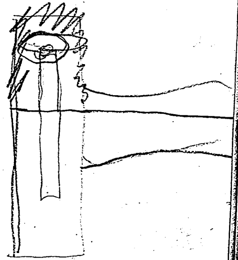

22, 11
9 1/8
4/2

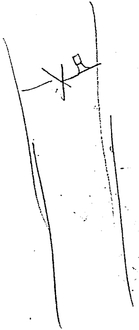


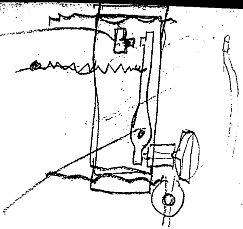


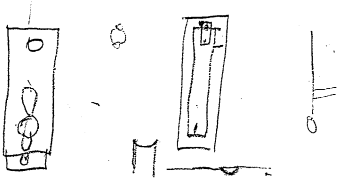


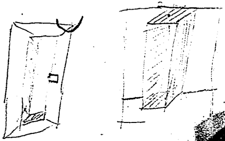


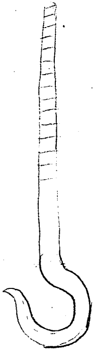


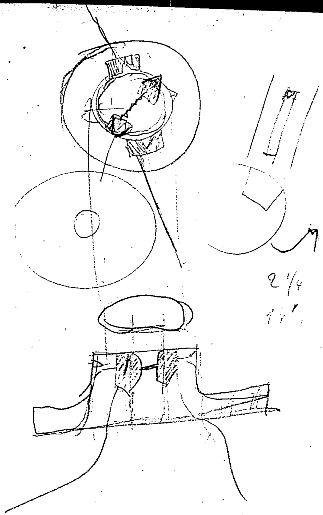






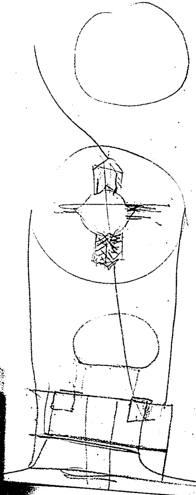


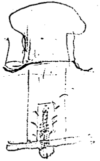


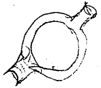


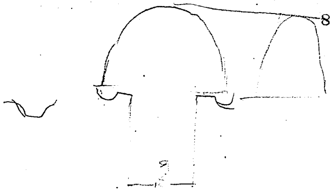
2 1/4

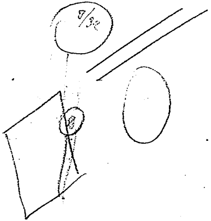
1 1/2

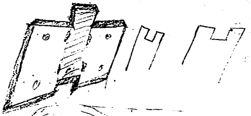


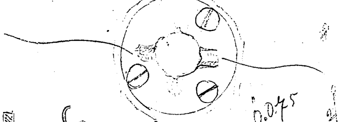







3/32



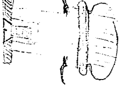


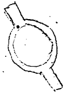
0.075

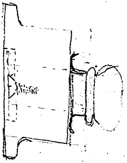
0.350
3
0.060

0.014
360
5100

0.060



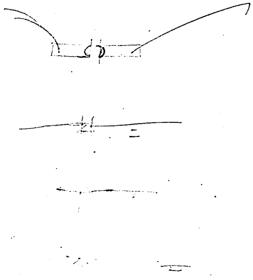




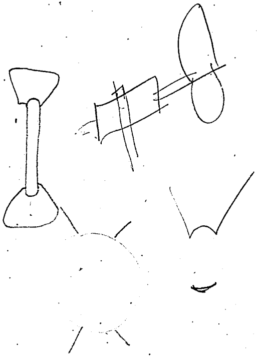
~~Accident these~~

~~[illegible]~~

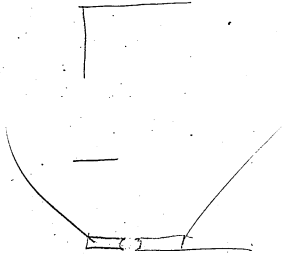
Mix Gyp'r Plaster
with glue water
& cement [illegible]
lamps [illegible]
do not [illegible]
cement [illegible]
wires - [illegible]
off by Ch[illegible]



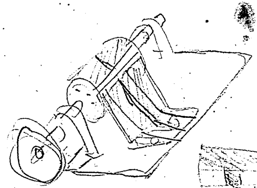
Fix this ~~[illegible]~~
Switch same
as the other
- make the [illegible]
holes [illegible]
for the [illegible]
and
Cut the wire [illegible]
where marked
with Pencil



Make this



12 Nov 1880 Toh



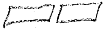
| | | | | | |
|---|---|---|---|---|---|
| T | C | T | C | T | C |

| | | | |
|---|---|---|---|
| 9 | C | 9 | C |

~~John —~~
~~Please solder~~
~~these two cords~~
~~together neatly~~
~~so as to make~~
~~one long cord~~
~~Keep them straight~~
~~E H J~~

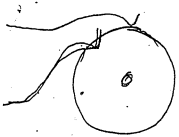
The short spring
wont do — The Ends
of the springs must
be exactly on top
of the cylinder —

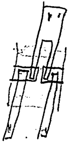
---

The copper strips
must be split
in the centre.
thus 

E H Johnson

over





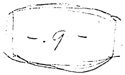
---

When you finish this job go on with the Lamp Sockets GHJ

14
4
56

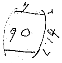
52

4 12



18

14
4
56



8

75.8

75
14

195
12
390
195
2340
37
16380
7020
86580 = 721.5
88.92

12) 86580
25

35
8
280
42
40
362

2
47

118.5) 2323

4) 118.5

2.27) 721.5 — 328
681
415
224
1880

28

29.6
1.8

4.970
362
5.332

19.5
3
58.5

47.3

118.5) 8658.0
8295
3630
3550

40.0

78) 721.5

19.5
16

4.2

54
6
324

44
6
264
8
344

032
8
296
80
376

2
9
9
9

170) 721.5
680
415

86 single 6.1 No. 20 wire = 6.1 ~~ohm~~ ohm

118.5) 721.5
7110
1050

5.2
6
31.2
1

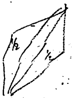
5
5
5

52
4
208
7.5
1040
1456
12) 15100 (1258
12
31
24
70
60
100
96
4

28

312
45
1560
2298
12) 23800 (2108
24
23
12
100
896
4

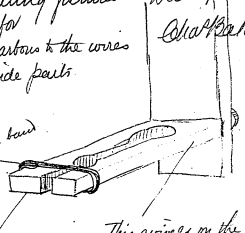
6 3 3/8
12
72
3
7.5

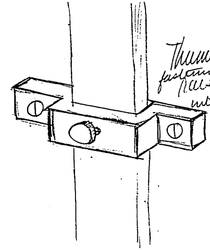


Copperplating pictures for plating Carbons to the wires of the inside parts

Dec 29th 1880

Chas Batchelor


Soft rubber band
Hard rubber
This swivels on the upright


Thumbscrew for fastening rod after raising or lowering into liquid —

14½

14½ × 2 × 3/16

14½ × 2 ×

14.5 × 2 ×

14.5
2
29.4
.196
294
5.586

Cubic inch 220

.0625
.1875

225
110

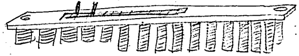
470
470
40
9

940
470
1410
120

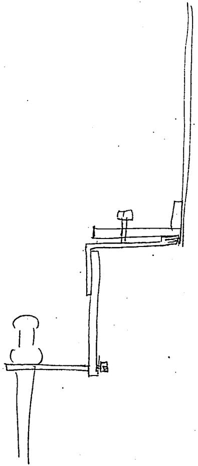
5.6
.312
112
56
168
1.7272

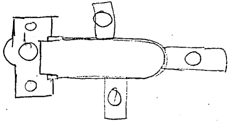
226

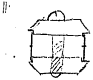
# Cost of Resistance box as made by Bergman

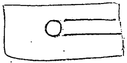


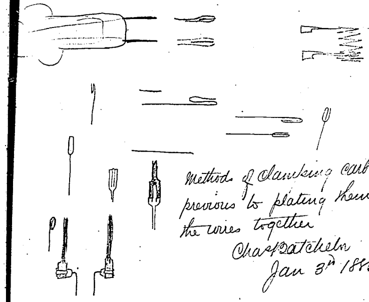
| | | |
|---|---|---|
| German Silver Wire | | |
| Base | 20 | .35 |
| Wood for Spools | | .20 |
| Iron screws (Wood) | 30 | 15 |
| Brass wood screws | 84 | 40 |
| 6 Brass screws for Bind post ~~Bind posts~~ | | 12 |
| Making Spools | | 1.50 |
| 6 Copper washers | | 4 |
| Brass 2 lb at 23 | | 46 |
| Rubber for plugs 6 plugs | | .10 |
| Drilling 47 holes | | .10 |
| Reaming 34 holes | | .10 |
| finishing | | 1.00 |
| Sawing | | 15 |
| Making plugs 6 | | .30 |
| Assembling | | 1.50 |
| Gave Bergman Contract for 100 at $7 each | | 6.50 |









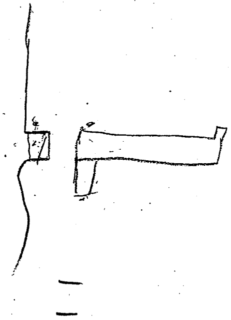


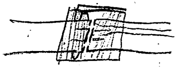
Method of clamping carbons previous to plating them and the wires together

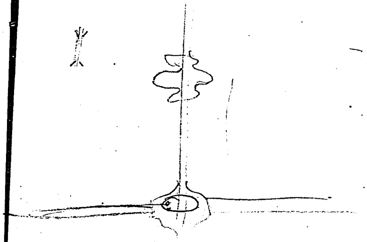
Chas Batchelor
Jan 3rd 1881

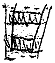
John

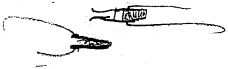
Please cut enough
off the head tube
in the Old "neub."
Socket to prevent
a short circuiting

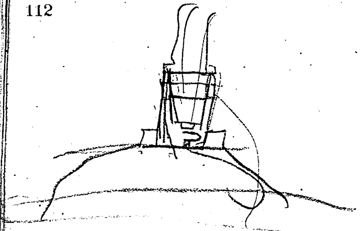


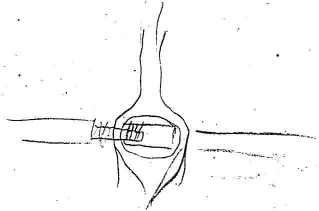






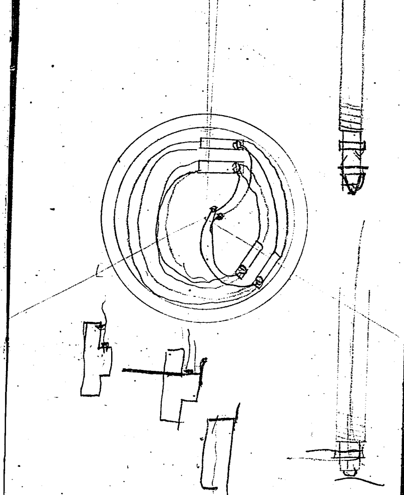






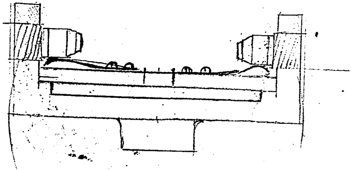
Jan 20 . 1881

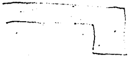
John F. Ott.

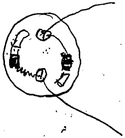


Jan 20. 1881

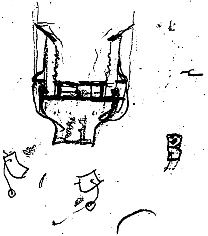
John F Ott

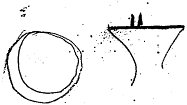


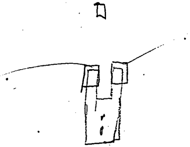


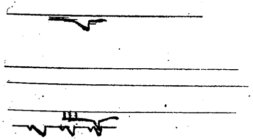


Jan 26. 1831

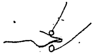


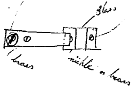


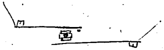


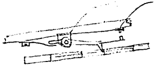


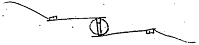
Jan 27, 1881
John F. Ott.

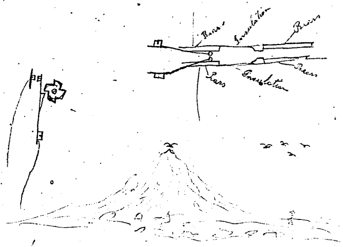


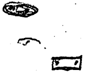

Glass
brass
nickle or brass

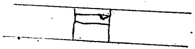


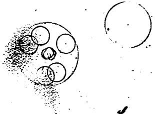





Brass
Insulation
Brass
Brass
Insulation
Brass

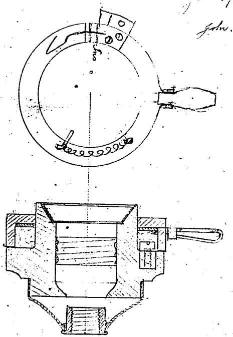


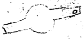


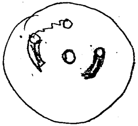


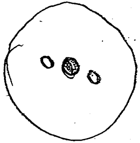
Nov 27. 1881

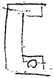
John. F. Ott.

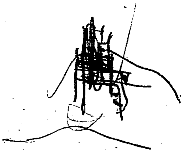


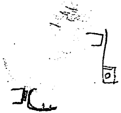




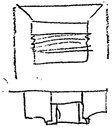


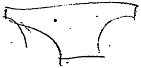


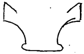


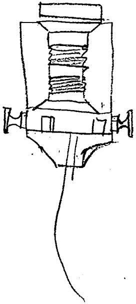


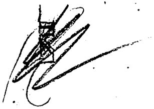
7.

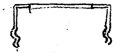


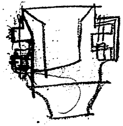




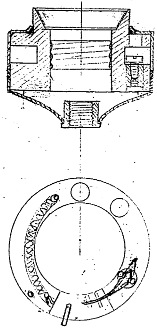


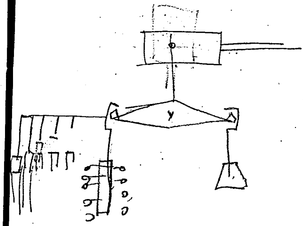


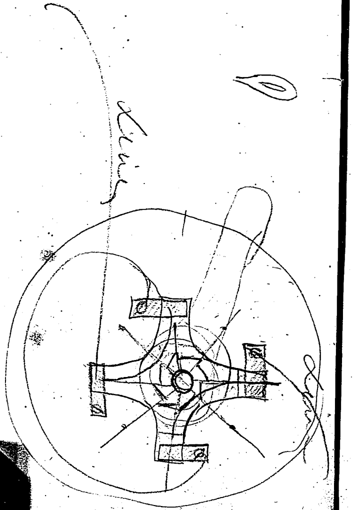


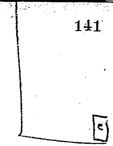


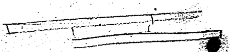
Jan 27, 1881
John F Ott

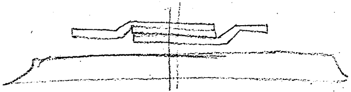


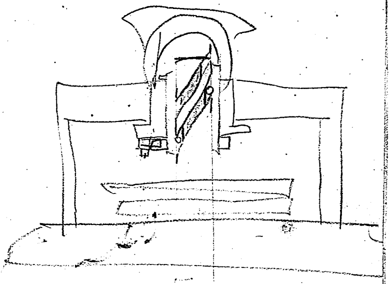

y

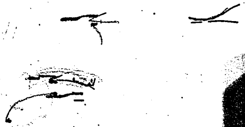


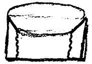


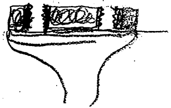


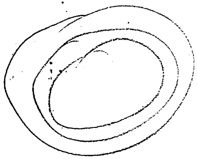






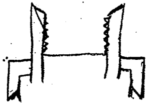


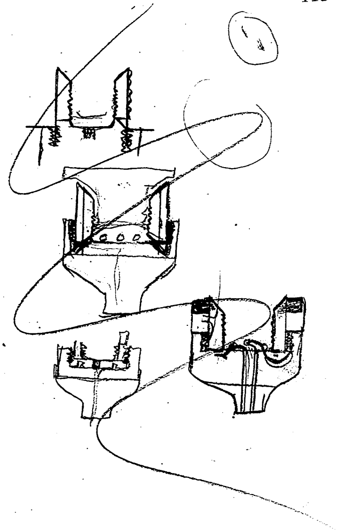




37

70





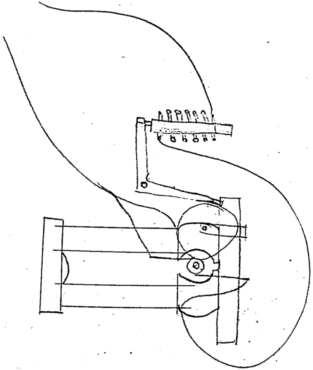
John Please
Fix this One
to turn like
the Other and
Nurl the top
Cap.

EHJ

T.A. Edison

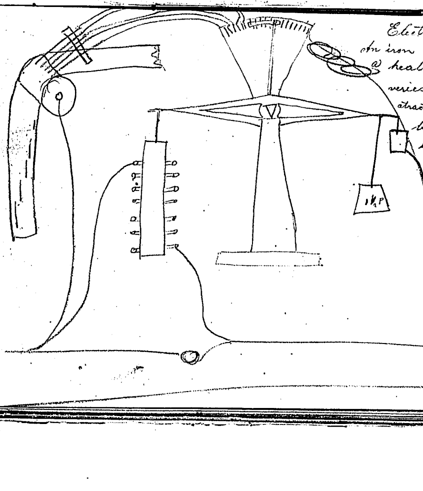
Feb 12, 1881

John F Ott



Electric Meator,

An iron core suspended in @ healix, as the curent veries so will the mgnetic atraction very tilting the beam up or down shunting the curent from one pen to the other on camical paper



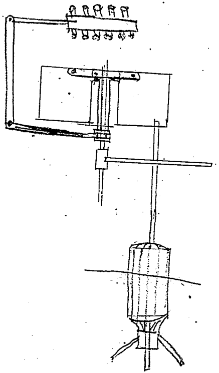
T.A. Edison John F. Ott

Feb 12. 1881

T.A. Edison

John F. Ott.

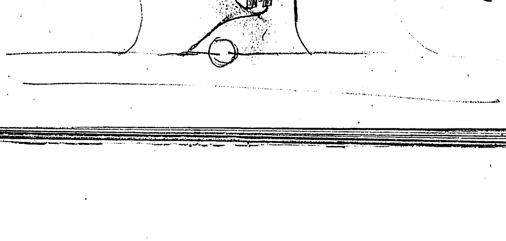
Feb 12, 1881.

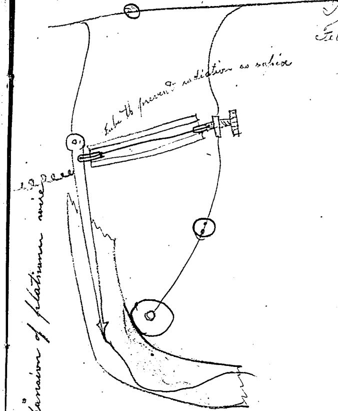


T. A. Edison John F. Ott

Feb 12. 1881

Two air tights chambers, the curent being past through causing the air to expand acting on diafram that acts on leaver shunting the curent in the opisit one then vice virce.



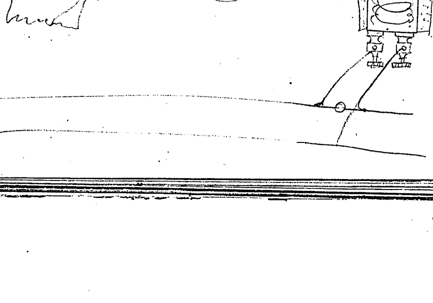

tube to prevent radiation as [illegible]
Expansion of platinum wire

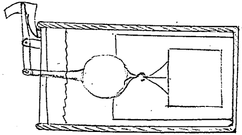
T A Edison
Feb 12, 1881
John F. Ott

Feb 12. 1881.

John F. Ott.

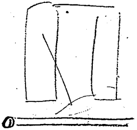
a spiral of wire inclosed in a airtight chamber and offering sufic
resistance to heat when the ~~curent~~ flows, and expanding the
air ~~the act on~~ diafram which acts on leaver.
and indicating on cemical paper

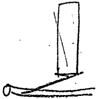




John Ott

Please have the new wooden
sockets which will probably come
monday— all fixed like this one—
no cork wanted— use the thin German
silver— & give plenty of surface contact
—instead of great pressure— round
the contact pieces a trifle before
putting ~~the~~ the spring in—
fasten it in with 3 Pins from
inside— make spring exactly size
of this one— solder wire connection
to Binding Post & make both
B Posts alike— EHJ

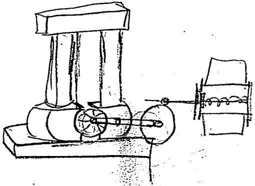




T. A. Edison

Menlo Jan 12, 1881

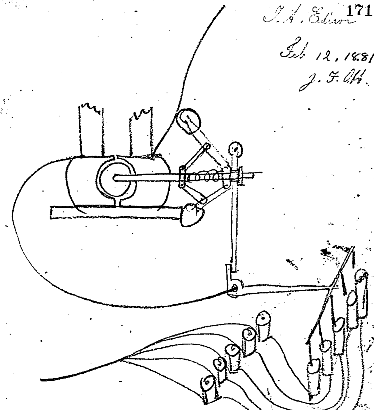
J. F. Ott



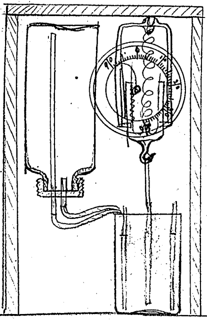
Speed regulator the fan so arranged as to open as the speed increases offering more resistance

T. A. Edison

Feb 12, 1881
J. F. Ott.



Speed regulated as the speed increases the governor opens and moves a lever and Throws ~~out~~ resistance.

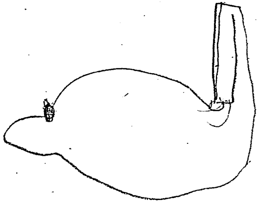


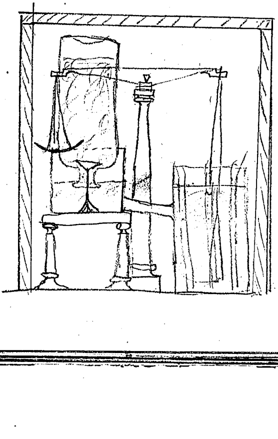
Automatic Solution feed, and spring scale indicating the deposit when one plate being to heavy they are to be revissed when the inspector inspects the Meator

T. A. Edison

Jan 15. 1881.

J. F. Ott.

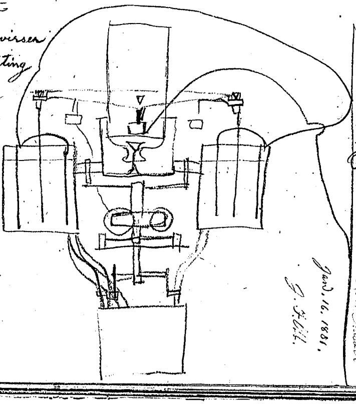




Autimatic solution
fast and beam scale
only to weigh when
the inspector inspects
the Meators

T.A. Edison
Jan 16. 1881.
J. F. Ott.

Autimatic Meter
without curent reverser
on every tilt empting
the jar and filling
the opisit one



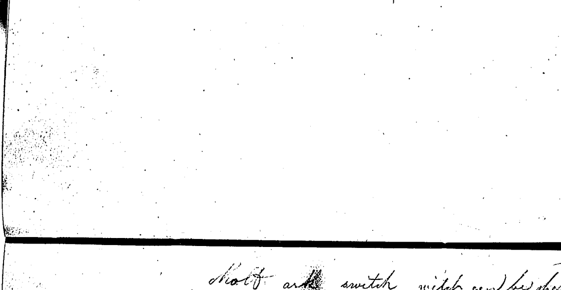
Thos A. Edison

Jan. 16. 1881.
J. F. Ott.

180

T. A. Edison 181
John F. Ott
Sep 1880

Note arc switch which can be shorted by hand or foot


Insulated
Insulated
Main circuit

Meater No 3

| | On Time | Off Weight | T. Off Time |
|---|---|---|---|
| | 9 20. | 18.07 | 11.00 |
| K | 11:15. | 13.20. | 12:15. |

8

16

6 5/8
8 1/8
14 6/8

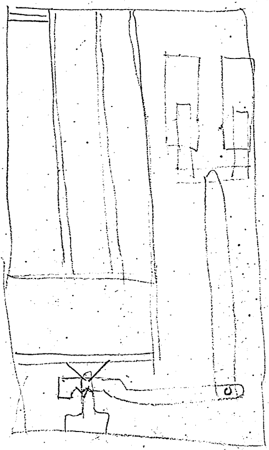
2 5/8
5 4/8
8 2/8

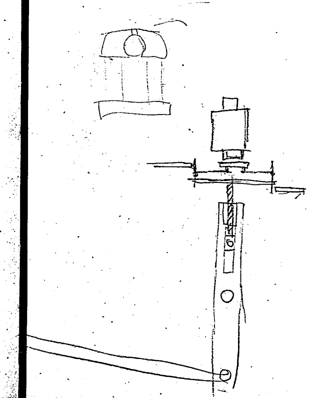
2 3/8

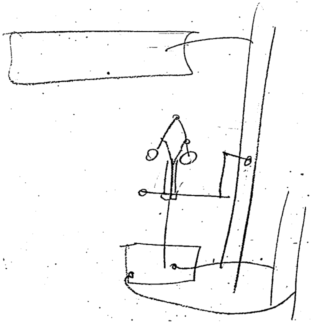
7 3/8
9
16 3/8

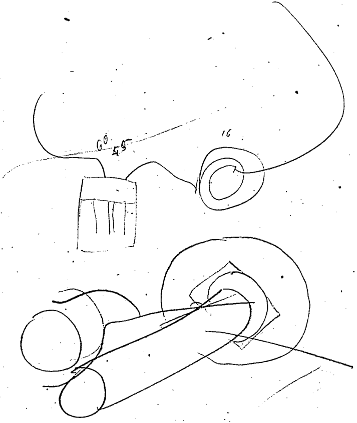
Meotta Tank No 2

| Date | Time | Feet | Date | Time | Feet |
|---|---|---|---|---|---|
| eb 18 | 315 | | | | |









312<br>
87

2184<br>
2496

12) 26644 (2220 4/~~12~~<br>
24<br>
26<br>
24<br>
24<br>
24<br>
4 28

7 3/8

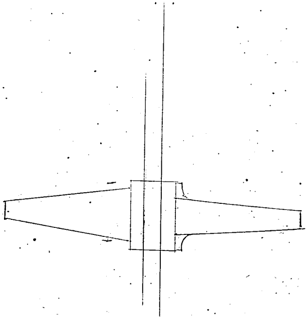
312<br>
8

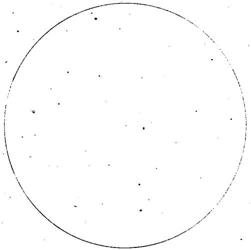
312

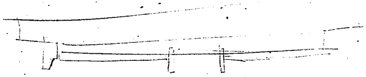
7 3/8<br>
12

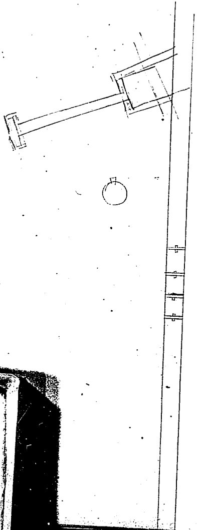
84<br>
3

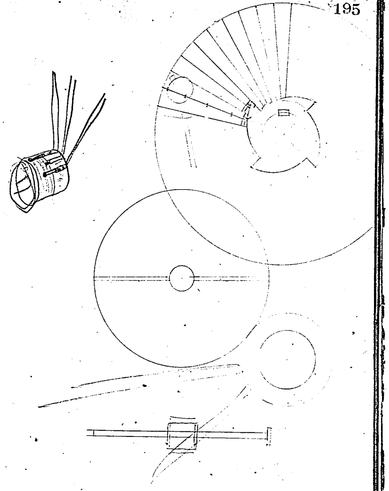
87

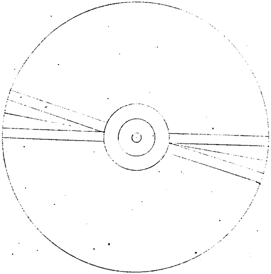












Pour réduire m/m en pouces ang.
ajoutez 0, et ÷ par 0.254

Pour réduire pouces en m/m
ajoutez un 0 ÷ par 4.

Il [illegible] augmenté de
4/100 du nombre donné de pouces
en

6
4
24

1500 | 4
20 | 150
2.4
152.4

m/m

500

2000 | 0.254
32 | 1.810

= 2

2,54

4